

What is Claimed is:

1           1. A method for executing a query against a database, wherein the database  
2 includes partitions for storing table data based on a partitioning schema with each  
3 partition associated with a partition identifier and database catalog information associated  
4 with the database, the method comprising:

5           (a) identifying a partition identifier in accordance with the partitioning schema;  
6           (b) selecting the partition identifier based upon the contents of the query and the  
7 database catalog information; and  
8           (c) executing the query against the identified partition.

1           2. The method of claim 1, wherein step (b) further includes:  
2           (b.1) storing the database catalog information in a database catalog cache.

1           3. The method of claim 2, wherein step (b.1) further includes:  
2           (b.1.1) building a subset of the database catalog; and  
3           (b.1.2) storing the subset of the database catalog in the catalog cache.

1           4. The method of claim 1, wherein step (b) further includes:  
2           (b.1) resolving the partition identifier.

1           5. The method of claim 4, wherein step (c) further includes:  
2           (c.1) executing the query based upon the identified partition identifier.

1           6. The method of claim 4, wherein step (b) further includes:  
2           (b.2) forwarding the identified partition identifier to a client application  
3 requesting table data.

1           7. A database management system for executing a query against a database,  
2 wherein the database includes partitions for storing table data based on a partitioning  
3 schema with each partition associated with a partition identifier and database catalog  
4 information associated with the database, the method comprising:  
5           a schema-lookup module to identify a partition identifier in accordance with the  
6 partitioning schema;  
7           a partition-router module to select the partition identifier based upon the contents  
8 of the query and the database catalog information; and  
9           a data-manager module to execute the query against the identified partition.

1           8. The system of claim 7, wherein the partition-router module includes:  
2           a catalog-cache module to store a portion of the database catalog information in a  
3 database catalog cache.

1           9. The system of claim 8, wherein the catalog-cache module includes:  
2           a build-cache module to build a subset of the database catalog; and  
3           a store-cache module to store the subset of the database catalog in the catalog  
4 cache.

1           10. The system of claim 7, wherein the partition-router module includes:

2 a connection module to resolve the partition identifier.

1 11. The system of claim 10, wherein the data-manager module includes:  
2 an execution module to execute the query based upon the identified partition  
3 identifier.

1 12. The system of claim 10, wherein the partition-router module includes:  
2 a client-coordinator module to forward the identified partition identifier to a client  
3 application requesting table data.

1 13. A program product apparatus having a computer readable medium with  
2 computer program logic recorded thereon for executing a query against a database,  
3 wherein the database includes partitions for storing table data based on a partitioning  
4 schema with each partition associated with a partition identifier and database catalog  
5 information associated with the database, said program product apparatus comprising:  
6 a schema-lookup module to identify a partition identifier in accordance with the  
7 partitioning schema;  
8 a partition-router module to select the partition identifier based upon the contents  
9 of the query and the database catalog information; and  
10 a data-manager module to execute the query against the identified partition.

1 14. The program product of claim 13, wherein the partition-router module  
2 includes:

3           a catalog-cache module to store a portion of the database catalog information in a  
4       database catalog cache.

1           15.    The program product of claim 14, wherein the catalog-cache module  
2       includes:  
3           a build-cache module to build a subset of the database catalog; and  
4           a store-cache module to store the subset of the database catalog in the catalog  
5       cache.

1           16.    The program product of claim 13, wherein the partition-router module  
2       includes:  
3           a connection module to resolve the partition identifier.

1           17.    The program product of claim 16, wherein the data-manager module  
2       includes:  
3           an execution module to execute the query based upon the identified partition  
4       identifier.

1           18.    The program product of claim 16, wherein the partition-router module  
2       includes:  
3           a client-coordinator module to forward the identified partition identifier to a client  
4       application requesting table data.